

Product datasheet for RN217429

Nlrp3 (NM_001191642) Rat Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Nlrp3 (NM_001191642) Rat Untagged Clone
Tag: Tag Free
Symbol: Nlrp3
Synonyms: Cias1
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >RN217429 representing NM_001191642
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGAAGATGATGAGTGTTTCGCTGCAAGCTGGCCAGTATCTAGAGGACCTGGAAGATGTGGACCTCAAGA
 AATTTAAAATGCATTTGGAAGATTACCCACCCGAGAAAGGCTGTGTTCCGATCCCCAGGGCCAGATGGA
 GAAGGCAGATCACTTGGATCTAGCCACACTCATGATTGACTTCAATGGGGAGGAGAAGGCGTGGGGCATG
 GCTGTGTGGATCTTTCAGCGATCAACAGGCGAGACCTCTGGGAAAAGCTAAGAAGGACCAGCCAGAGT
 GGAATGATGCATGCACGTCTAATCTCTCCATGGTGTGCCAGGAAGACAGCCTTGAAGAGGAGTGGATAGG
 TTTGCTGGGATATCTCTCCCGCATCTCGATTTGTAAAAAAGAAAGATTACTGTAAGATATACAGAAGG
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 GACGCTACACCCAGCTCCAAGTGGTCAAGGAGCATCCAAGCAAGCAGGAAAGGGAGCATGAACTCTTGAC
 CATTGGCAGGACTAAGATGTGGGACAGGCCATGAGCTCCCTTAAGCTGGAGCTGCTCTTTGAGCCTGAG
 GATGAACACTTGGAGCCCGTGCACACAGTGGTGTCCAGGGAGCAGCAGGCATCGGAAAAACAATCCTAG
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 CCACTGTCGAGAGGTGAGCCTCAGGGCACAAAGAGCCTAGCAGATCTCATTATCAGCTGCTGGCCTGAC
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 TCCTTTCCAGCCTGCTGCAGTCCCGGGGGGATTGAGGAGCACCTCTTCTGCTACCTGCCAGGGCT
 CTGTTTATTGGCTGCGGATGGAATTTGGAACCAGAAGATCCTATTTGAAGAGTGTGATCTGCGGAAACAC
 GGCTGCAGAAGACCGACGTCTCTGCTTCTGAGAATGAACGTGTTCCAGAAGGAGGTGGACTGCGAGA



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GATTTTACAGCTTCAGCCACATGACTTTCCAGGAGTTCTTTGCGGCTATGTACTATCTGCTAGAAGAGGA
GGAAGAGGGGGTGACCGTGAGGAAGGGACCAGAAGGCTGTTTCAGACCTTCTGAACCGAGACGTGAAGGTC
CTATTAGAAAATTACGGCAAGTTCGAAAAAGGCTATCTGATTTTTGTTGTACGCTTCCTCTTTGGCCTTG
TAAACCAGGAGAGAACTTCTATTTGGAGAAGAAGCTAAGTTGCAAGATCTCTCAGCAAGTCAGACTGGA
GCTGCTGAAGTGGATCGAAGTGAAGCCAAGGCCAAGAAGCTGCAGAGGCCAGCCAGCCAGCTGGAAGTG
TTCTACTGCTTGTACGAGATGCAGGAGGAAGACTTTGTGCAGAGCGCCATGGGCCACTTCCCCAAAATTG
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AACACTTTCCTGGGATTTCTCCACAACCTCACCCAAGGAGGAAGAAGAAGAGAAAAGAGGAAGTCAACCC
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TCACCTCTAGCTTCTGCCGAGGTCTCTTCTCAAGTCTCAGCACCAACCAGAGCCTCACTGAAGTGGACCT
CAGTGACAATACTCTAGGGGATCCAGGCATGAGGGTGCTGTGTGAGGCACTCCAGCACCCAGGCTGTAAC
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GCGTGTGTGTCAGGATCTCGCATTGGTTCTGAGCTCCAACCATTCTGACCAGACTGTACATTGGAGAAA
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GCTGGGGTTGGTGAATCCGGCCTTACTTCACTGTGCTGCTCAGCTCTGACCTCTGTGCTCAAAACCAAC
CAGAACCTCACACACCTGTACCTACGAAGCAATGCCCTTGGAGACATGGGACTCAAGCTCCTCTGTGAGG
GACTTCTGCACCCCGACTGTAAGCTACAGATGCTGGAGTTAGACAACCTGCAGCCTCACCTCACACTCCTG
CTGGGATCTCTCCACAATTCTGACCATAACCAGAGCCTCCGGAAGCTGAACTTGAGCAACAACGACCTG
GGCGATCTGTGTGGTGTGACGCTCTGTGAGGTTCTGAAACAGCAGGGCTGCCTCCTGCAGAGCCTACAGT
TGGGTGAAATGTATTTAAATTGTAAACAAAACGTACCTTAGAAGCTCTCCAGGAGGAAAAGCCTGAGCT
GACTGTTGTTTTGAGATTTCTTGGTAG
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ACGCGTACGCGGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM_001191642
- Insert Size:** 3108 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- OTI Annotation:** Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
- Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
- RefSeq:** [NM_001191642.1](#), [NP_001178571.1](#)

RefSeq Size: 3857 bp

RefSeq ORF: 3108 bp

Locus ID: 287362

UniProt ID: [D4A523](#)

Cytogenetics: 10q22

Gene Summary: As the sensor component of the NLRP3 inflammasome, plays a crucial role in innate immunity and inflammation. In response to pathogens and other damage-associated signals, initiates the formation of the inflammasome polymeric complex, made of NLRP3, PYCARD and CASP1 (or possibly CASP4/CASP11). Recruitment of proCASP1 to the inflammasome promotes its activation and CASP1-catalyzed IL1B and IL18 maturation and secretion in the extracellular milieu. Activation of NLRP3 inflammasome is also required for HMGB1 secretion (By similarity). The active cytokines and HMGB1 stimulate inflammatory responses. Inflammasomes can also induce pyroptosis, an inflammatory form of programmed cell death. Under resting conditions, NLRP3 is autoinhibited. NLRP3 activation stimuli include extracellular ATP, reactive oxygen species, K(+) efflux, crystals of monosodium urate or cholesterol, amyloid-beta fibers, environmental or industrial particles and nanoparticles, cytosolic dsRNA, etc. However, it is unclear what constitutes the direct NLRP3 activator. Activation in presence of cytosolic dsRNA is mediated by DHX33 (By similarity). Independently of inflammasome activation, regulates the differentiation of T helper 2 (Th2) cells and has a role in Th2 cell-dependent asthma and tumor growth. During Th2 differentiation, required for optimal IRF4 binding to IL4 promoter and for IRF4-dependent IL4 transcription. Binds to the consensus DNA sequence 5'-GRRGGNRGAG-3'. May also participate in the transcription of IL5, IL13, GATA3, CCR3, CCR4 and MAF (By similarity).[UniProtKB/Swiss-Prot Function]